

## REMARKS

The action referred to above and the references cited therein have been carefully studied with respect to the instant application. Also, each of the rejected claims have been carefully amended so as to place them in condition for allowance. Set forth hereinafter is the legal basis supporting Applicants' position that each of the said claims are properly allowable.

Paragraphs 1 and 2 of the action referred to above deal with 37 CFR 1.71, by quoting same and thereafter rejecting each of claims 1-51 on the ground that the specification is deficient because of alleged failure to include an adequate disclosure of means by which the claimed segments are created. This rejection is based on the enablement requirement set forth in 35 U.S.C. §112, and with respect thereto, the Court of Appeals for the Federal Circuit has repeatedly held that the scope of enablement "is that which is disclosed in the specification *plus the scope of what would be known to one of ordinary skill in the art without undue experimentation.*" National Recovery Technologies Inc. v. Magnetic Separation Systems, Inc., 49 U.S.P.Q. 2d 1671, 1676 (Fed. Cir. 1999) (emphasis added).

It is the Applicants' position that the disclosure contained in the specification is adequate to meet the requirements of 37 CFR 1.71, because those persons skilled in the art or science to which the Applicants' invention pertains would readily recognize the means by which such segments can be created. The prior art is replete with descriptions which set forth that lead bullet cores can be formed in any shape or size through the use of well-known punch and die procedures.

Submitted herewith are the following sworn affidavits of Steven R. Moore (Exhibit 1); Lawrence P. Head (Exhibit 2); and Robert L. Kramer (Exhibit 3), all skilled artisans in the relevant field. Each of such individuals firmly state that a man skilled in the art would readily recognize, upon reading the specification of the instant application, that the bullet described therein could and should be made in accordance with punch and die procedures which are well-known and highly used by such men for making and using such lead core bullets. Moreover, as stated, such men are all capable of almost instantly being able to visualize

the shape of the punch required to produce such a bullet, with minor variations. These affiants advise that almost 100% of all lead core bullets being currently formed are produced through the use of such punch and die equipment and all of them are designed easily and quickly by such men skilled in the art, once the shape and size of the bullet is agreed upon.

There is a clear disclosure in Figs. 7 and 4 of the cross-sectional configuration of the individual segments and the specification describes the segments as being wedge-shaped, and points out that they extend from the hollow point cavity in the front end, to a point near the longitudinal middle of the bullet. (see page 6, lines 8-9). Fig. 7 shows clearly that the core segments 5 are physically separated. The three (3) affidavits identified hereinabove each speak to the fact that it is well known in the art that the lead core of bullets can be, and are in fact, manufactured by utilizing punch and die procedures referred to hereinabove. In view thereof it is respectfully submitted that the holding that the specification of the instant application is inadequate, is clearly in error.

Paragraphs 3 and 4 of the above-entitled action deal with quotations of the first paragraph of 35 U.S.C. 112 and the second paragraph thereof.

Paragraph 5 rejects each of claims 1-51 on the ground that one skilled in the art, after studying the specification, would not be able to manufacture a malleable core having the plurality of separate segments shown in the instant application. Again, the basis for the holding appears to be the statement that there is no disclosure relating to the means by which the segments may be created. The arguments outlined hereinabove with respect to paragraphs 1 and 2 are equally applicable to this rejection, because it is well recognized throughout the art of manufacturing lead bullet cores that such cores can be and almost always are created through the use of such punch and die methods. It is the understanding of the undersigned that everyone worthy of the name of being a man skilled in the art of manufacturing lead cores readily understands that such manufacture is easily accomplished through the use of such well-known punch and die procedures. Also, such a man skilled in the art would readily know how to design whatever punch designs would be required to manufacture a lead bullet core such as is shown and described in the drawings and specification of the instant application.

Paragraph 6 rejects each of claims 1-51 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter in which the applicant regards as the invention. It appears that this rejection is based upon an objection to the inclusion in the preamble of each of the claims of "current FBI and IWBA standards for law enforcement." The objection seems to be that those standards could change point at sometime in the future. These grounds for rejection are not understood since although the standards might change, the standards as quoted make it clear that the invention is in accord with the standards of law enforcement which are current, and constitute merely informational material. In any event, the so identified material has been cancelled from the preamble of each of the claims of the instant application and therefore the rejection under 35 U.S.C. 112, second paragraph, has clearly been obviated, in view thereof, and in view of the universally practiced punch and die procedures outlined hereinabove.

Paragraph 7 includes a quotation taken from 35 U.S.C. 102 and appears to be the ground relied upon in paragraph 8 for the rejection of each of claims 1-51 in reliance upon the prior existence of U.S. Patent No. 5,079,814 issued to Moore et al ("Moore"). The rejection is based upon the mere statement that Moore discloses a hollow-point bullet 10. The Applicant's have disclosed and claimed much more than a mere hollow-point bullet and therefore the indicated statements obviously fail as a prior art disclosure which anticipates the Applicant's claims. Applicants' claims each call for separate multiple core segments or specify that the segments are non-bonded relative to the jacket.

Paragraph 9 of the action referred to above appears to be intended to be combined with paragraph 8 in support of an unstated rejection of claims 1-5 and 7-12. This paragraph states that Moore discloses a bullet having certain features common to those set forth in claims 1-5 and 7-12. Each of claims 1-5 has been amended to specify that the core segments are physically separate constructions. There are no physically separate segments in the lead core of Moore. All that can be said of Moore is that it has a single core which is variously defined as having creases, lines, or narrower slits, the sharpness of which is blunted in the process of completing the manufacture of the core (see column 3, lines 54-55). It appears that these various markings are the result of

piercing of the electroplating so as to barely extend into or mark the lead core within the electroplating. A crease is defined in the dictionary as "a line, or mark made by or as if by folding a pliable substance - a line, groove, or ridge that is made by or as if by folding a pliable substance and is generally larger or longer than a wrinkle and not so deep as a fold." A slit is defined as "a long, narrow cut or opening." It is notable that the plating metal 28 is bonded to the core 24 both within the cavity and on the exterior of the nose 14. (see column 3, lines 64-66, inclusive). It appears therefore that the creases 36 are very shallow in that they are blunted. In any event, there is no plurality of physically separated segments. While it is true that Moore, as a result of the bonding created by the electroplating, does tear the single metal core apart during and after the mushrooming action, there is no such plurality of physically separate segments in the bullet prior to its destruction.

It is noteworthy that the Applicant's have disclosed a bullet which is entirely different from the Moore bullet in that the metal core of Moore is surrounded entirely by an electroplated jacket which is bonded to that core. Even the cavity of Moore is electroplated and the segments referred to therein are segments of the jacket and not of the metal core. The inventions differ widely in that Moore is concerned only with mushrooming and ignores entirely the expansion problem, whereas the Applicants herein are confronted with the problem and necessity of designing a bullet which must first pass through barrier material without substantial mushrooming, and thereafter enter a viscous target in condition to mushroom to 1 1/2 - 2 times its initial size and travel 12.5 - 16 inches within that target, in order to be effective. Thus, it must mushroom sufficiently to have maximum impact upon the ultimate target and it must travel within the target 12.5 - 16 inches, all after having passed through barrier material all of which tends to collect within the cavity of the bullet and thereby preclude effective mushrooming when the ultimate target is hit.

In addition, Moore fails to disclose the degree of cavity which is required in order to produce the desired amount of mushrooming. There is nothing in Moore which suggests that an angle of 35-50 degrees is critical. Moore merely invites experimentation by stating that there is a "desired angle," leaving it up to the reader to select the proper angle from a choice of 0 - 90 degrees relative to the longitudinal axis of the bullet. The Applicants, on

the other hand, have arrived at their claimed angulation of 30 - 50 degrees and have determined the success thereof by calculations and substantial subsequent testing which confirms the claimed range of 30 - 50 degrees.

The alleged invention of Moore and the invention of the Applicants herein differ widely. Moore is concerned only with adequate mushrooming and he ignores the expansion problem and the problem presented in real life by barriers in the form of metal, automobile glass, clothing, etc. which, constitute frequent and substantial barriers, particularly in law enforcement situations. The Applicants, on the other hand, have solved the problem of multiple barriers which are presented, by initial piercing thereof without undue expansion, the maximum expansion being delayed until the bullet enters a viscous body. The Applicants bullet pierces the barrier without undue expansion because the prescribed angularity of the cavity precludes collection thereon of substantial amounts of barrier material, the expansion being delayed until the bullet enters the viscous target within which it expands to 1.5 - 2.0 times its initial size and travels 12.5 - 16 inches within the body and without traveling therethrough. Moore is silent with respect to a possible solution of all of these problems.

Moore differs further in that the entire jacket is comprised of electroplating which is bonded to the metal core, and he does not utilize multiple physically separated segments in his expandable core. Instead, Moore utilizes a single core body with creases or minor slits 36 made in a single core. Moore obtains expansion of the single core by the bonding between the petals and that core which creates the tearing of the core apart, subsequent to the bullet being fired. Moore provides no suggestion as to the angle of the cavity wall to be used, but instead impliedly invites experimentation. An invitation to experiment has consistently been held to be an inadequate ground to constitute an anticipating disclosure.

With respect to paragraph 9 of the action referred to above, claims 1-5 differ patentably in that each of said claims has been amended to specify that the bullet is comprised of physically separated core segments. Moore has a single core segment until after the bullet has been destroyed and the mushrooming has taken place.

Further with respect to paragraph 9 and claims 7-12, each of these claims have been amended to specify that the metal core is mounted within the jacket in non-bonded relation thereto. Moore differs in this respect and

the difference is critical because he obtains his mushrooming only as a result of the bonding between the petals and the nose portion of the metal core. Thus, the bonding is critical to Moore and each of claims 7-12 differs patentably therefrom because the Applicants' metal core is in non-bonded relation to its jacket in each of said claims.

With respect to paragraph 10 of the action referred to above and which specifically rejects claim 6, the latter claim via amendment specifies that the core is comprised of physically separated core segments which Moore clearly does not have. All that Moore has is a single core with some markings on the exterior surface thereof.

With respect to paragraph 11 of the action referred to above, claims 13-15, inclusive and 18 are rejected on the ground that Moore discloses a tapered nose 14 having six (6) petals formed by making slits through the outer side of the jacket. It is alleged that Fig. 1 discloses this construction. Each of the above claims is dependent from claim 7 which, as indicated hereinabove, is clearly patentable because its metal core is mounted within the jacket in non-bonded relation thereto. In addition, claims 14 and 15 each stand amended to specify that the segments are multiple and physically separated from each other and thereby differ from the Moore construction substantially, which makes them properly patentable.

With respect to paragraph 12 of the action referred to above, claim 19 stands amended to specify that the metal core is in non-bonded relation to the jacket and is comprised of a plurality of physically separate segments. Claim 19 differs patentably in each of these two respect from Moore. Claim 19 also stands amended to read that the petals extend rearwardly from the open forward end of the jacket a distance at least one-half of the length of the nose portion. Fig. 1 of Moore clearly shows that the slits 20 extend a distance far short of one-half the length of the nose portion which extends from the forward end of the cylindrical portion of the jacket to the forward end of the bullet.

With respect to paragraph 13 of the action referred to above, the rejection of claims 19-22, 24, and 25 is clearly not tenable because of the amendment to independent claim 19, which now specifies that the metal core is

in non-bonded relation to the jacket. Each of claims 20-22, inclusive, 24 and 25 are dependent from claim 19 and therefore are clearly properly patentable along with claim 19. In addition, claim 22, 24 and 25 are each amended to specify that the core segments are physically separate, and each is therefore clearly allowable for this additional reason.

With respect to paragraph 14 of the action referred to above, each of claims 28-31 is dependent from claim 19 which, as shown hereinabove, is now clearly patentable because of the amendment to independent claim 19 which now states that the metal core is in non-bonded relation to the jacket.

With respect to paragraph 15 of the action referred to above, each of claims 32-36 is dependent from independent claim 19 which stands amended to specify that the metal core is mounted within its jacket in non-bonded relation thereto. Since claim 19 is clearly properly allowable as amended, each of claims 32-36 is also properly allowable.

With respect to paragraph 16 of the action referred to above, each of claims 37, 40 and 41 is dependent from independent claim 19 and therefore is properly allowable along with claim 19, as described hereinabove.

With respect to paragraph 17 of the action referred to above, claim 39 is dependent from amended independent claim 19 and therefore is now properly allowable for the same reasons as outlined hereinabove with respect to claim 19.

With respect to paragraph 18 of the action identified hereinabove, claim 42 is dependent from independent claim 19 and therefore is clearly allowable for the same reasons as outlined herein above with respect to claim 19.

With respect to paragraph 19 of the action referred to above, each of claims 43-45 is properly allowable because claim 43 has been amended to specify that the core segments are physically separate and the metal core is surrounded by a jacket in non-bonded relation. Claim 43 which is independent has been so amended and is properly allowable for the same reasons as outlined hereinabove with respect to claim 19. Since claims 44 and 45

are each dependent from claim 43, they are properly allowable for the same reasons as specified hereinabove for claim 43.

With respect to paragraph 20 of the action referred to above, claim 47-51 are independent claims each of which has been initially carefully drawn so as to be patentably distinguishable over the other claims. Each of these claims has now been amended to specify that the core is in non-bonded relation to its surrounding jacket and therefor is properly patentable for the same reasons as expressed hereinabove with respect to claim 19. In addition, each of said claims has been amended to specify that the core segments are physically separate and therefor each is properly allowable for the same reasons as set forth hereinabove with respect to the fact that the individual core of Moore is clearly not comprised of a plurality of physically separate segments.

With respect to paragraph 22 of the action identified hereinabove, in which claims 16 and 26 are rejected as being unpatentable over Moore, claim 16 is properly patentable for the reason that Moore fails completely to disclose material which anticipates the range of angularity of the cavity as set forth in claim 16. As set forth hereinabove, Moore fails completely to contain any suggestion of any particular angle which should be utilized in defining the cavity wall. At best, Moore suggests that there is a desired angle somewhere between 0 - 90 degrees. It has been consistently held throughout the past that an invitation to experimentation is not a sound ground for rejection of claims. In addition, claim 16 is dependent from claim 7 and is allowable for the same reasons as set forth hereinabove with respect to claim 7. Likewise, claim 26 is dependent from claim 19, which is properly allowable for the reasons set forth hereinabove, since it is dependent therefrom.

With respect to paragraph 23 of the action identified herein above, claim 46 is rejected in that paragraph as being unpatentable over Moore in view of Cesaroni. As indicated hereinabove, Moore fails miserably as a primary reference because his alleged invention is entirely different from that disclosed and claimed by the Applicant's herein. This difference is accentuated by the amendment to claim 46 which specifies that the core is formed within its jacket in a non-bonded relation thereto and is also amended to specify that the core segments

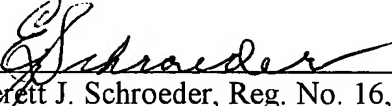


are physically separate. For the reasons outlined hereinabove, claim 46 is allowable for each of these reasons since neither of the two cited references carry any suggestion of such a claimed structure.

With respect to paragraph 24 of the action referred to above, claims 27 and 38 stand rejected as being unpatentable over Moore in view of Carter. Here again, Moore fails miserably as a primary reference because his invention is entirely different and the disclosure of Moore is an exact opposite with respect to the relation between the core and the jacket, in that claim 19 (from which claims 27 and 28 are dependent) specifies that the core is formed within the jacket in non-bonded relation thereto. It also specifies that the core segments are physically separate. Neither of these features are remotely suggested in either Moore or Carter and therefore that rejection is entirely improper.

In view of the above, it is respectfully submitted that each of the claims as amended herein is clearly patentable and their early reconsideration and allowance is therefore most respectfully requested.

Respectfully submitted,

  
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